

# Jeopardy Assessment

Incidental Taking Authorization  
for the Butler's Garter Snake for the Wisconsin Department of Transportation's  
Highway 164 Expansion Project  
Swan Road to Howard Lane  
Waukesha County, Wisconsin

## Background

The state-threatened Butler's gartersnake is the smallest of the five Wisconsin gartersnake species. Both sexes of this species reach maturity during their second full year and females deliver 4-19 live-born young in mid to late summer. The Butler's garter snake is a colonial species that is restricted to several southeastern counties in Wisconsin. This species requires a moderately open to open canopy habitat, preferably with both upland and wetland habitat. Butler's naturally hibernate in open-canopy wetlands (sedge meadows, fringes of cattail marshes, etc.) but are also known to occupy sites that provide other means for successful overwintering (i.e. old landfills where conditions provide access below the frostline and where adequate moisture exists).

The Butler's gartersnake was listed as a state-threatened species in 1997 for two primary reasons: extensive habitat loss within its very limited range; intergradation with a similar species, the eastern plains gartersnake *Thamnophis radix*. Habitat loss leads the list of threats. In addition, habitat fragmentation has caused populations to become isolated, potentially compromising their genetic integrity. Additional habitat losses will further hamper recovery efforts unless enough sites can be identified and preserved to perpetuate this species.

Intergradation with the plains gartersnake likely continues at the periphery of the Butler's known range, particularly at the southern and western edges of its range, but is expected to lessen as habitat fragmentation isolates populations. This will, in turn, create other management challenges in dealing with the long-term survival of the Butler's gartersnake.

Surveys and monitoring since the snake's listing in 1997 reveal that Butler's can occur in large numbers on relatively small sites (i.e. 400+ snakes detected on a 20-acre site with less than 50% suitable [open canopy] habitat). At sites where Butler's have been well surveyed, their populations tend to show a healthy age-class structure, indicating that regular recruitment is occurring at those locations. Surveys have also demonstrated that Butler's can occur on disturbed and degraded sites.

Range limits for the Butler's gartersnake may be further refined as additional information on genetics and taxonomy becomes available. Changes in range limits may necessitate re-assessing jeopardy policies, by either relaxing or tightening allowable take.

In summary, the Butler's gartersnake is a fast-maturing species with potentially high annual recruitment. The habitats required for this species have and are continuing to be lost due to development pressures within southeastern Wisconsin. Relatively large populations can potentially be sustained on relatively small sites (under 20 acres), which may or may not be degraded, but as these sites become further isolated, their populations may suffer from genetic stagnation. The long-term future of this species remains unclear and the protection of all sites considered valuable for long-term conservation of the species should continue.

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The proposed STH 164 Expansion project will likely result in the limited destruction of Butler's gartersnake habitat along four separate locations along the project corridor and may result in the take of individual snakes. Minimal mortality is anticipated as a result of the highway expansion project due to project redesigns resulting from the presence of the snake and the required conservation measures outlined below. The department has determined that the proposed project is not likely to jeopardize the continued existence or recovery of the state population of these snakes or the whole plant-animal community of which they are a part.

## **Conservation Measures**

1. Snake exclusion fencing (trenched-in sediment fencing) must be installed prior to March 15 (according to the Department's Snake Exclusion Fencing Design and Construction Requirements) along all areas of upland suitable habitat that will be lost or disturbed as part of this project to prevent snakes from moving into these areas following emergence from hibernation. Snake exclusion fencing locations are delineated in the drawing sheets listed below.
2. Trenched-in sediment fencing must be installed (according to the Department's Snake Exclusion Fencing Design and Construction Requirements) in all wetland areas to be lost or disturbed by this project to minimize the incidental take of snakes. Snake exclusion fencing locations are delineated in the drawing sheets listed below. Because the areas to be lost are very small edges of wetland habitats, snake removals will not be required as the number of snakes likely to be lost are expected to be very low.
3. Fencing must be maintained and inspected throughout the active snake season (March 15 through November 1) according to the Department's Snake Exclusion Fencing Design and Construction Requirements.
4. Restoration and enhancement of Butler's habitat on newly graded side slopes with appropriate seeding. Side slopes will be managed as snake habitat with mowing restrictions according to the Department's management guidance for Butler's Gartersnake Habitat.
5. Four ecopassages, defined here as corridors running under the highway that will allow Butler's gartersnakes and other wildlife to move between habitats fragmented by the highway, will be installed at the following locations. The locations correspond with drawings from DOT's consultants CH2M Hill- State Projects No. 2748-03-70 and 2748-03-71- Sheet Nos. 1-18.
  - #1- C-67-58
  - #2- C-67-59
  - #3- C-67-282
  - #4- B-67-279 & 280

The specifications of these ecopassages are contained in the drawings referenced above.

6. Monitoring of ecopassages will be conducted three and five years following construction.